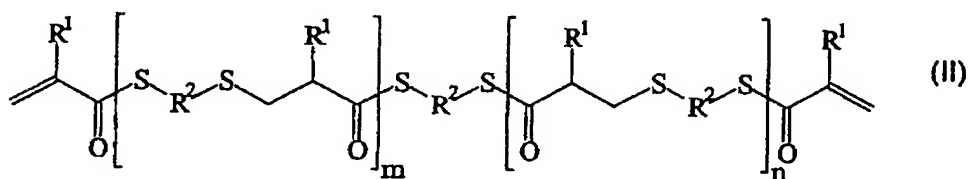


IN THE CLAIMS

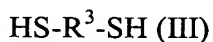
Please amend the claims as follows:

Claim 1 (Currently Amended): A mixture for the production of transparent plastics, comprising

a) a prepolymer, produced from compounds of the formula (I) and (II)



wherein  $\text{R}^1$  each independently of one another mean hydrogen or a methyl residue,  
 $\text{R}^2$  each independently of one another mean a linear or branched, aliphatic or cycloaliphatic residue or a substituted or unsubstituted aromatic or heteroaromatic residue and m and n each independently of one another mean a whole number greater than 0 with  $m + n > 0$ , and alkylthiols or polythiols, ~~preferably compounds of the formula (III),~~



wherein  $\text{R}^3$  can similarly or differently from  $\text{R}^2$  have the meaning stated in  $\text{R}^2$ , and

b) at least one radical polymerizable monomer (A) with at least two methyl acrylate groups and

c) aromatic vinyl compounds,

d) optionally a radical polymerizable monomer with at least two terminal olefinic groups, which differ in reactivity, and/or

e) optionally at least one ethylenically unsaturated monomer (B).

Claim 2 (Original): The mixture as claimed in claim 1, characterized in that it contains more than 10 mol.% of compounds of the formula (II) with  $m + n = 2$ , based on the total quantity of the compounds of the formula (I), (II) and (III).

Claim 3 (Currently Amended): The mixture as claimed in ~~one of the foregoing~~ ~~claims~~ claim 1, characterized in that the residue  $R^2$  of the formulae (I) and/or (II) is an aliphatic residue with 1 to 10 carbon atoms.

Claim 4 (Currently Amended): The mixture as claimed in ~~one of the foregoing~~ ~~claims~~ claim 1, characterized in that the mixture contains more than 5.8 mol.% of compounds of the formula (II) with  $m + n = 3$ , based on the total quantity of the compounds of the formula (I), (II) and (III).

Claim 5 (Currently Amended): The mixture as claimed in ~~one of the foregoing~~ ~~claims~~ claim 1, characterized in that the mixture contains 1 to 50 mol.% of compounds of the formula (I), based on the total quantity of the compounds of the formula (I), (II) and (III).

Claim 6 (Currently Amended): The mixture as claimed in ~~one of the foregoing~~ ~~claims~~ claim 1, characterized in that the mixture contains 1 to 40 mol.% of compounds of the formula (II) with  $m + n = 1$ , based on the total quantity of the compounds of the formula (I), (II) and (III).

Claim 7 (Currently Amended): The mixture as claimed in ~~one of the foregoing~~ ~~claims~~ claim 1, characterized in that the mixture contains compounds of the formula (II) with  $m + n > 3$ .

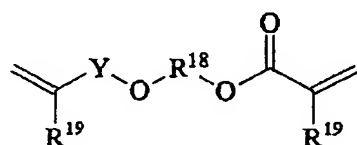
Claim 8 (Currently Amended): The mixture as claimed in ~~one of the foregoing~~  
~~claims~~ claim 1, characterized in that the total content of compounds of the formula (I), (II)  
and (III) is at least 5.0 wt.%, based on the total weight of the mixture.

Claim 9 (Currently Amended): The mixture as claimed in ~~one of the foregoing~~  
~~claims~~ claim 1, characterized in that the mixture contains at least one monomer (A) which is  
copolymerizable with the prepolymers prepared from the monomers of the formulae (I), (II)  
and (III).

Claim 10 (Original): The mixture as claimed in claim 9, characterized in that the  
mixture contains di(meth)acrylates.

Claim 11 (Currently Amended): The mixture as claimed in ~~the foregoing claims~~  
claim 1, characterized in that the mixture preferably contains styrene as aromatic vinyl  
compounds.

Claim 12 (Currently Amended): The mixtures as claimed in claim 1, characterized in  
that they contain a radical polymerizable monomer with at least two terminal olefinic groups  
which differ in reactivity, of the general formula



(XII),

wherein

the residue R<sup>19</sup> independently means a hydrogen atom, a fluorine atom and/or a  
methyl group,

the residue R<sup>18</sup> means a linking group which preferably contains 1 to 1000, in  
~~particular 2 to 100~~ carbon atoms, and the residue Y means a linkage or a linking group with 0

to 1000 carbon atoms, ~~in particular 1 to 1000 carbon atoms and preferably 1 to 100 carbon atoms.~~

Claim 13 (Original): The mixtures as claimed in claim 12, characterized in that they contain allylpolyethylene glycol methacrylate.

Claim 14 (Currently Amended): The mixtures as claimed in claim 1, characterized in that they contain at least one ethylenically unsaturated monomer (B), ~~preferably methacrylate.~~

Claim 15 (Original): The mixtures as claimed in claim 14, characterized in that they contain 2-hydroxyethyl methacrylate.

Claim 16 (Currently Amended): A process for the production of transparent plastics, characterized in that a mixture as claimed in ~~one of the foregoing claims~~ claim 1 is polymerized.

Claim 17 (Original): A transparent plastic obtainable by a process as claimed in claim 16.

Claim 18 (Original): The plastic as claimed in claim 17, characterized in that the refractive index of the plastic according to DIN 53491 is greater than 1.59.

Claim 19 (Currently Amended): The plastic as claimed in ~~claims 17 or 18~~ claim 17, characterized in that the Abbé number of the plastic according to DIN 53491 is greater than 36.

Claim 20 (Currently Amended): The plastic as claimed in ~~one of claims 17 to 19~~  
claim 17, characterized in that the mean value of the diameter of the ball which does not  
damage the test specimen in the falling ball test is  $\geq 18$ .

Claim 21 (Currently Amended): The plastic as claimed in ~~one of claims 17 to 20~~  
claim 17, characterized in that the transmission of the plastic according to DIN 5036 is  $\geq$   
89%.

Claim 22 (Currently Amended): The plastic as claimed in ~~one of claims 17 to 21~~  
claim 17, characterized in that its glass transition temperature is greater than 80.0°C.

Claim 23 (Original): A mixture containing

(a) a mixture as claimed in claim 1 and

(b) at least one photochromic dye.

Claim 24 (Original): A photochromic material containing a mixture as claimed in  
claim 23.

Claim 25 (Currently Amended): A ~~use of~~ method of using the photochromic material  
as claimed in claim 24 as a lens or glass panes or glass inserts.

Claim 26 (Currently Amended): The ~~use of~~ method of using the highly transparent  
plastic as claimed in ~~one of claims 17 to 22~~ claim 17 as an optical lens.

Claim 27 (currently Amended): An optical, ~~in particular ophthalmic~~ lens containing  
a transparent plastic as claimed in ~~at least one of claims 17 to 22~~ claim 17.